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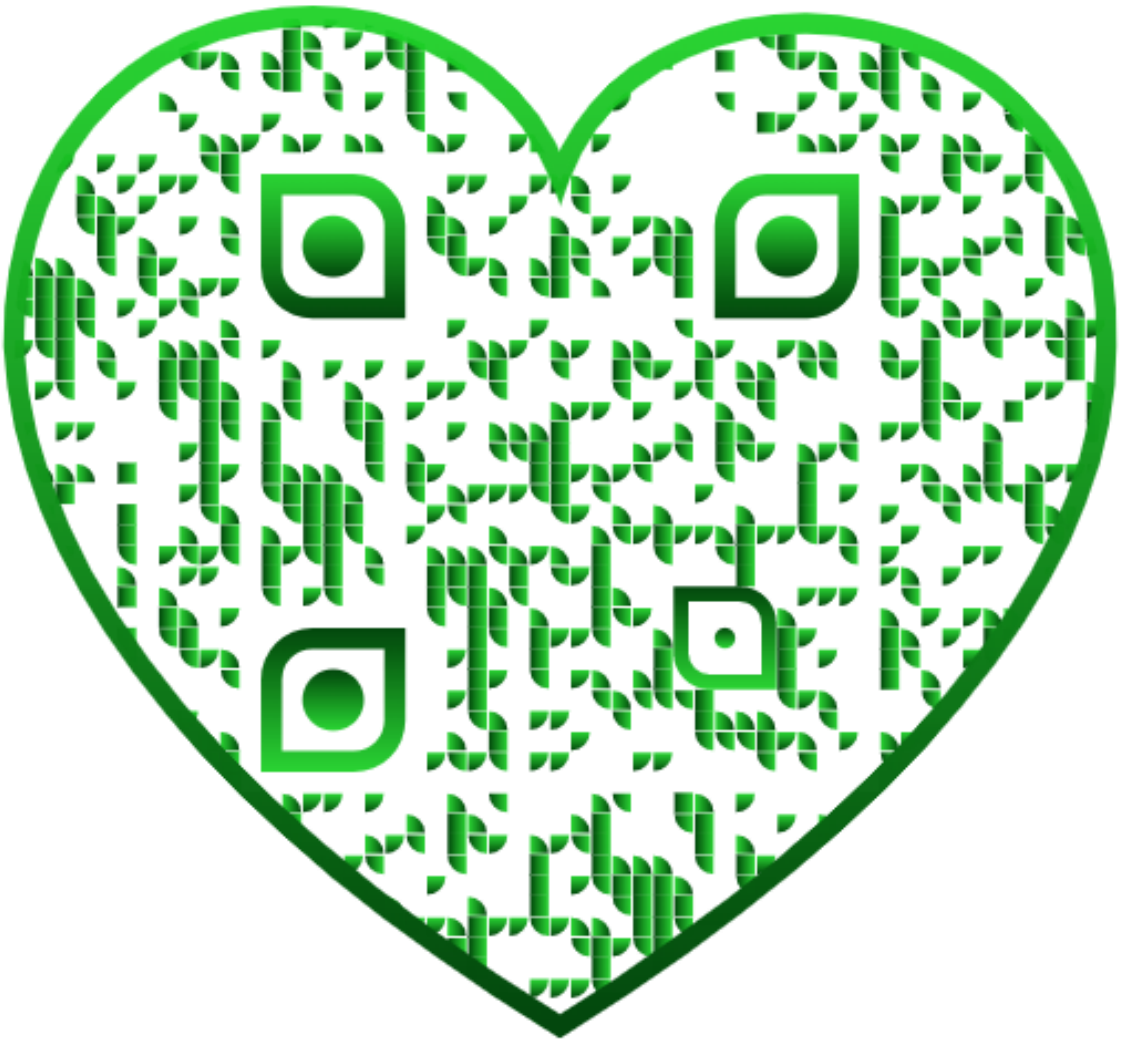

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النقص فينا باقي، والكمال بالمشاركة والتعاون.

في حال وجود أي خطأ او تعديل، يرجى ارساله إلى بوت اللجنة العلمية:-

@scientificGroup37Bbot

DERMATOLOGY LECTURE NOTES FOR MEDICAL SCHOOL

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COMMON SKIN INFECTIONS

INFECTIONS OF THE SKIN

- Bacterial infection
- Viral infection
- Fungal infection
- Parasitic infestation
- Mycobacterial infection

FUNGAL SKIN INFECTIONS

Divided into:

1- Superficial fungal skin infection:

a- Dermatophyte infection

b- Candidiasis

c- Malassezia Species (Pityriasis Versicolor)

2- Deep fundal skin infection

Note:
We will be focusing on superficial fungal infection.
Deep fungal infection occurs in people with immunodeficiency problems or with D.M. etc. it's rare.
Fungi is a unicellular

FUNGAL SKIN INFECTIONS

1- *Dermatophytes:*

Dermatophytes are group of fungi capable of infecting nonviable keratins cutaneous structures(st. corneum, nails and hair)

The term tinea is best used for dermatophytes and is modified according to anatomical site.

Note:

Dermatophytes: infects:

1. Stratum corneum—doesn't infect deep layers except in immunocompromized pts.
2. Head's "hair follicles because it's rich with keratin.

If the infection is in hair follicles we treat with systemic antibiotics because it's considered as deep infection.

DERMATOPHYTES:

- Risk factors:

- Hot, humid weather , occlusive footwear; excessive sweating
- Can be transmitted through contact where arthrospores survive for 12 months in human scales.

Note:
That’s why the most common in Tinea is Tinea Pedis or tinea cruris since it grows in close sites with a lot of sweating and humidity. People who live in crowded rooms have a higher change of getting the infection due to it’s high survival rate of “12 months” and poor hygiene.

DERMATOPHYTES:

Diagnosis:

- Potassium hydroxide (KOH): dissolves keratin but leaves behind the hyphae seen under direct microscopy
- Woods lamp
- Fungal culture

Note:
KOH-allows us to see fungi as mycelia with cells inside or as an accumulation of cells “arthrospores”—each cell develops individually and forms spore around itself.
Tinea can leave a fluorescent mark that Wood’s lamp allows us to see.

DERMATOPHYTES

1- Tinea Capitis (Trichomycosis):

Infection of the scalp

Common fungal infection of children.

- Highly contagious, scalp ringworm most commonly occurs in children, particularly children of African heritage aged 3-9 years.

Scalp involvement: Scaly, black dot , kerion, Favus

Treatment with oral antifungal

Note:
Tinea capitis does not occur in adults and rarely does it occur after the age of 13-15 years old.
Black dots occur because tinea feeds on keratin so it breaks the hair from its neck or root.

TINEA CAPITIS

- Clinical variants:

1- Black dot (Non inflammatory)

2- scaly (Non inflammatory- seborrheic dermatitis like type)

3- kerion (inflammatory)

4- Favus (inflammatory)

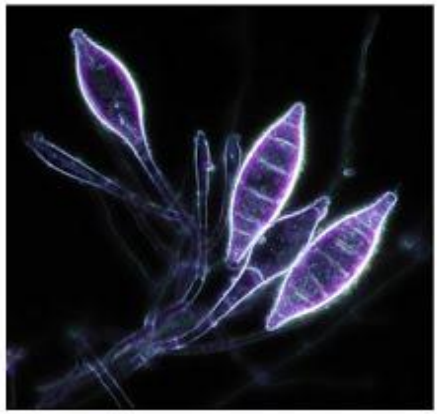
Note:
When the inflammation gets deeper, the body starts to secrete exudate that forms kerion or favus a multilayer crust with yellowish color but no pus.
Treatment of choice for kerion or favus is oral antifungal antibiotics and anti-inflammatory drugs to prevent cicatricial alopecia.

TINEA CAPITIS

- Spreads through contact with contaminated items and fomits with the spores.
- Managed by topical and systemic ttt

Tinea Capitis

Fungal Infection of Scalp



Note: Tinea

Scaly type of Tinea

Black dots

Yellowish scales turning into Favus

Kerion, common presentation sometimes comes with cicatricial alopecia due to local treatment by plants/herbs.

Favus “multi-scales” can cause fibrosis.

Lymphadenitis

TINEA PEDIS/ATHLETES' FOOT

- Dermatophyte infection of the feet
- C/P: erythema, scaling, maceration +/- Bullae
- Clinical variants:-

1) Interdigital type (dry, maceration) ;Most commonly b/w fourth and fifth toes.

2) Inflammatory bullous type

3) Hyperkeratotic type

Note:
Pedis means feet
This infection is known as athletics' foot because it affects athlete's more since they wear shoes for prolonged periods of time—and they come wet/humid .(from sweating).
Clinical picture—erythema, scaling, maceration, softening.
Bullae may or may not be present.
Interdigital type-most affects the lateral toes. Will be dry with macerations.
Inflammatory bolus type= inflammatory signs (redness) and some bullae.
Hyperkeratotic type—must be differentiated from contact dermatitis as both have keratosis, scaling, calcification.
Treatment of both are different.
Treatment of contact dermatitis requires corticosteroids but if you treat Tinea pedis with corticosteroids it will initially be relieved (as inflammation and itching decreases) but then it will flare and relapse.
Skin swab test can be done to differentiate between them.

a

b

Adam Friedman, MD
JDD
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TINEA BARBAE

- Dermatophyte infection of the beard and Mustache in males
- Inflammatory : due to involvement of the hair follicle (pain) and skin (itching).
- Slowly progressive, farmers(violceum,mentographytes, rubrum)
- DDx: bacterial folliculitis
- Systemic treatment is the role

Note:
Tinae barbae affects farmers usually and they usually get it from animals.
Tinae barbae needs systemic anti-fugal for prolonged period 21days-1month.

Tinea Barbae
Inflammation flare (spread) with active margin and central healing.
Must be treated with anti-fungal or will persist (chronic)

Bacterial Folliciulitis
Caused by Staph Aureus
Less inflammation (localized)
Erythema with some pustules
May be cured within 1 or 2 weeks without treatment.

SFS

TINEA CRURIS (JOCK ITCH)

- Almost exclusively in post pubertal males/ RF
- Itching increases with moist climate, bilateral
- DDx: Intertrigo
- Inverse psoriasis
- Erythrasma

Note:
Usually affect people in hot climates such as in Hoddiadah.
Differential diagnosis with:
Intertrigo-has active margin with scales and red pustules.
Psoriasis—demarcated erythematous, more scales with papules.
Exanthema—discoid lesion (signs of inflammation)
Intertrigo and Psoriasis has more scales and red pustules but Tinea cruris has active margin with healing center.
Treatment usually systemic antifungal.

TINEA CRURIS (JOCK ITCH)

Source: Richard P. Usatine, Mindy Ann Smith, Heidi S. Chumley, Camille Sabella, E.J. Mayeaux, Jr., Elumalai Appachi: *The Color Atlas of Pediatrics*: www.accesspediatrics.com
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ONYCHOMYCOSIS (UNGUIUM)

- Tinea of the nails
- Prolonged systemic ttt

Note:
Requires prolonged treatment. Systemic antifungal from 6 months to 1 year as drug must continue until nail replacement occurs.

TINEA MANNUM

- Chronic , pruritic with fissures and pain
- Well demarcated scaling patches, hyperkeratosis, scaling , central clearing
- DDx:
- Atopy, CD, Lichen simplex chronicus,
- Better to use systemic treatment .

TINEA CORPORIS:

- Dermatophyte infection of the trunk, legs, arms excluding the face, groin, hands and feet.
- Appears in exposed skin as circinate, single or multiple itchy lesion.
- Sharp margin (raised edge =active border) with minute papules and pustules with a clearing center

Source: Neil S. Prose, Leonard Kristal: Weinberg's Color Atlas of Pediatric Dermatology, Fifth Edition
www.accesspediatrics.com
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TINEA CORPORIS:

- DDx:

- Circinate impetigo
- Pityriasis rosea
- Pustular psoriasis
- Discoid eczema

TINEA FACIALS

- Located in the face
- Well circumscribed, itchy, erythematous scaly macule or patch
- R/F: animal exposure, chronic CS exposure.
- DDx: seborrheic dermatitis, CD,

TINEA INCOGNITO:

- Associated with folliculitis.
- Occurs after application of topical corticosteroids
- Lesions vary from asymptomatic to pruritic and painful.
- Systemic antifungal may be prescribed.

Note:
Tinea incognito—no atypical central clearness due to use of corticosteroid to treat the fungal. Corticosteroid change the atypical feature (activate the lesion instead of the center being clear, it will be affected all over).

Tinea pedis :
Also known as athlete's foot, it affects the feet

Tinea unguium:
Ringworm of the fingernails and toenails

Tinea corporis:
It affects the arms, legs and trunk

Tinea manum:
Ringworm of the hands and palms

Tinea cruris:
Known as Jock Itch, this affects the groin area

Tinea capitis:
Ringworm affecting the scalp

Tinea barbae:
Ringworm of facial hair (beard)

Tinea faciei:
Also known as face fungus, it affects parts of the face

PITYRIASIS VERSICOLOR

- Caused by overgrowth of Malassezia furfur
- Chronic asymptomatic scaley disorder.
- Well demarcated scaley patches: hyper pr hypopigmented
- Most commonly on the trunk
- Not contagious

Note:
Pityriasis versicolor—macule in chest and back disappear after bath, then returns again after 3 days.
It’s a fungal infection
It is not contagious but needs certain factors to be activated.

- R/F;
- Warm seasons, tropical climate
- Hyperhidrosis , exercise
- Oily skin
- Corticosteroids ttt
- Immunodeficiency

Note:
Athletic people and hyperhidrosis
Corticosteroids—spur opportunistic infections.

- Additional ttt:

- Selenium sulfide
- Sulphur
- Salicylic acid

Note:
Additional treatment ketoconazole or azol family.

CANDIDIASIS:

- Most commonly caused by candida albicans
- Superficial infection of the skin and MM.
- Affects moist and occluded cutaneous surfaces

Note:
Mucus membrane or deep/extensive in immune compromised or HIV, and may arrive to oropharynx
Affects most occluded cutaneous surface ex. Intertriginous area—under the breast, maybe interdigitalis, mucous membrane of oral cavity

CANDIDIASIS:

- Clinical Manifestation:
- Intertrigo
- Diaper dermatitis
- Interdigital
- Follicular candidiasis
- Paronychia (chronic).
- Vulvovaginitis,
- Angular cheilitis , moniliasis

Note:
Intertrigo most common—in folded areas (usually covered by skin, ex. Armpit.
Diaper dermatitis– typically in infants and may be associated with mouiliasis in oral and sometime the mother comes with inflammation of chest so when infant come with mouiliasis in mouth. Should see the chest of mother.
Interdigitial—in diapers and it becomes painful and ulcerated.
Paronchia (chronic)– and treatment prolonged for 3 months.
Vulvovaginitis—comes in extremes of ages (old women and children) because the media there isn't suitable (no estrogen).
When the media is suitable the infection is decreased or decrease the liability to infection.

CANDIDIASIS:

- Clinically:
- Satellite lesions
- Initial pustules on erythematous base that becomes eroded and confluent.
- Inframammary, axillae and groin.
- Managemnt : prevention, oral and topical antifungals

Note:
Patch erythema and some ulceration and very painful.
Prevention– keep the area dry.

TREATMENT OF FUNGAL INFECTION

1) Topical antifungal preparations:

- Imidazole group : miconazole, ketoconazole, clotrimazole
- Allylamines: Terbinafine , naftifine

2) Systemic treatment:

- Terbinafine: 250 mg tab /day
- Itraconazole : 100 mg cap, oral solution 10-40 mg /kg

Note:
Terbinafine 250 mg tab/day for a month.

TREATMENT OF FUNGAL INFECTION

- Fluconazole: 100-150 mg
- Ketoconazole
- Griseofulvin:12,5 mg /kg : micronized and ultra micronized

Note:
Fluconazole 400mg single dose in case of candidiasis
Griseofluvin—D.O.C. In Tinea capitis 12.5-20mg/kg 6weeks-2months.
If tinea capitis is continuous may cause Alopecia, so must diagnose it early.

THANK YOU